

Figure 1

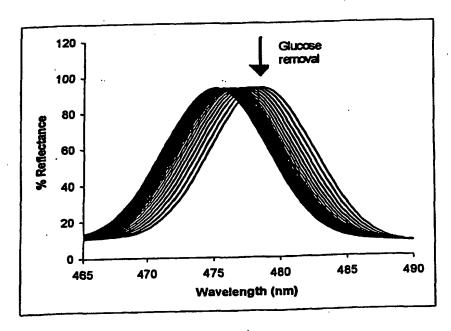


Figure 2

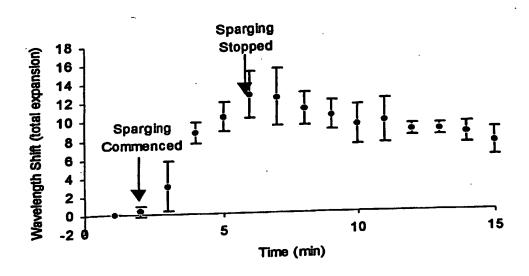


Figure 3

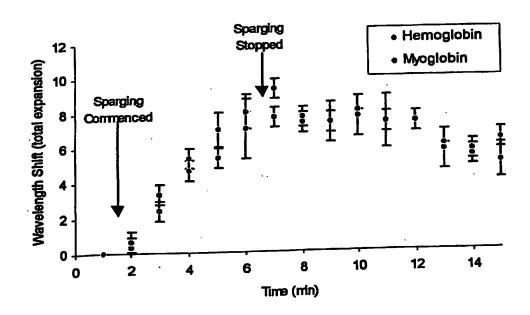


Figure 4

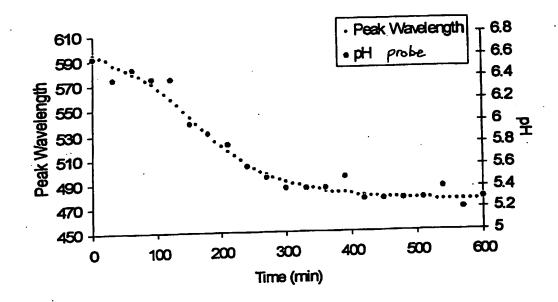


Figure 5

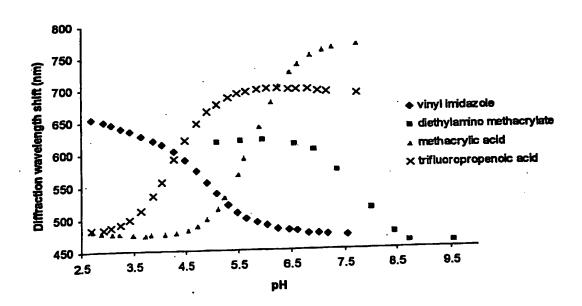
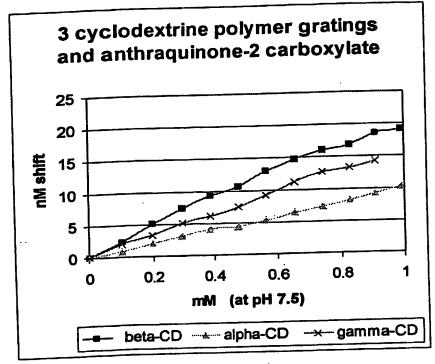
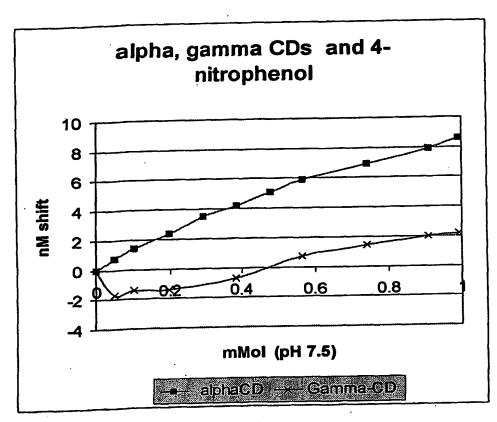


Figure 6

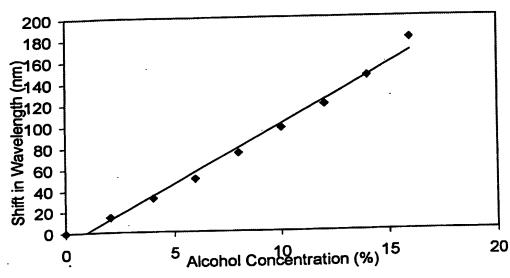


This shows how the gratings taken from the 3 cyclodextrine derivatives respond to low concentrations of for example anthraquinone 2 carboxylic acid Na salt at pH 7.5 at 30°C

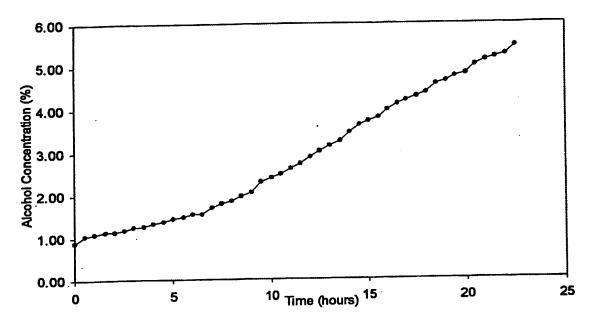
This compares the responses of alpha CD polymer and gamma CD polymer to low levels of 4-nitro phenol sodium salt at pH 7.5 at  $30^{\circ}$ C.



Gratings could be cleared of analyte by rinsing in deionized water or buffer solution. Typically a grating was agitated in the solution in a petri dish for 30 mins and the water was changed 3 times.



Calibration of polyHEMA hologram in grape juice cotaining varying concentrations of ethanol



Production of ethanol by Saccharomyces cerevisiae cultured in grape juice over 23 hours.